

4.12 Radical Reconstruction of Education: Role Based Learning for Creating Future for Self and Society (2012)

A Degree Program based on Scenario-Situation Based Learning and Development with Global-Local Networked Resource Support System

Summary

This is a reconstructed education program developed in Scenario-Situation Based Learning (SBL) model. The model is adopted along with the basic principles of Indian system of education evolved by Mahatma Gandhi in second-third decade of 20th Century, called Nai Talim. The Nai Talim finds very effective integration and expression of the approach proposed by J P Naik (1982), another renowned educationist of India, who formulated Role Based Learning (RBL) for creating futures and combines in it the Gandhian approaches of life and work related social education. The Role Based Learning (RBL) model is successfully applied to a pilot program of Teacher Education degree program (B Ed (e-Education)), in which all the stakeholders are always connected. It is a replicable and extendable system and is applied here to any degree education program. Due to its dependence on process-result based education and focus on human and social development for creating social value and wealth, the system of new education is found to be universal in nature, convergent of all the existing systems into goal based education for a person, groups and communities. This unique integration can be used further effectively in linking education with social development in the always connected society for personal and social progress and prosperity. The new education is performance based promotes creation of social value and wealth, converges all the existing modes of education into higher mode – the transmode of education. It also converges on the human and social development as a social goal of education, and shifts focus from learning of knowledge to the development of self and society with creativity and innovation.

This paper deals with the applications of the experiences and outcomes obtained from the B Ed in e-education program to any degree program development by using processes and mechanisms of the Information Communication Technology connected society.

Radical Reconstruction of Education

Introduction

We have now entered into the new age society of 21st century based on new and digital technologies. The tools and technologies derived from these technologies are now entering in all walks of life, connecting all globally, creating new social organisations and functions that are radically different and new from the 19-20th century practices. Many new processes arising out of digital technologies such as virtualisation, mass-personalisation, self-organisation on global level, open resource movement, social networking, etc, have no counterpart in the earlier agrarian or industrial society. Industrial Age created modernity, rationality based on scientific

causality, and technologies for mass production and global marketing. These global forces have no doubt created new ways of creating wealth, prosperity and progress. However it also created exploitative processes of extracting maximum from the nature and human societies and communities. It needed a new political management based on freedom to innovate, produce and exploit to become rich, physically and financially. Two contradictory directions, one of democracy based on liberty, equality, fraternity and justice emerged as a political solution for new modern global society; and another one for innovation and creativity of new machines and factories that can produce plenty for all to market them all over the world and earn profits for their own benefits. This dialectical situation created two opposing forces one of exploitation and another of liberation and innovation. Many models of development emerged for creating wealth and are being followed. One model is of making of a society and converting it into a great industrial factory, in which all humans are a resource for creating, developing, producing and marketing production globally. This engaged the society right from the top of any national political system and power to design and develop such a model of wealth creating and becoming progressive and modern. The two models, one based on capitalist and another based on communist way of development and production of plenty are being used globally. The process of mass production without relevance to the customer's specific needs emerged and global markets are flooded with artefacts and services, which are offering employment to many and entry into the modern life of industrial society. Both these models have failed as indicated by the failure of communistic regimes to survive in an enclosed artificial environment, as well as the free model of capitalist society that had the motive of maximisation of profits and earning money. Both have failed basically, as analysed by Mahatma Gandhi, due to excessive greed, exploitation of nature and humans, and has resulted into destruction, poverty and disparities. Modernity has give through mass production processes a plenty, but has taken a toll of natural and human resources irreversibly.

All these become an issue when one starts linking education with development. This is being done now globally as well as nationally by each country. The UNESCO programs of Education for Sustainable Development and Commonwealth of Learning, Vancouver, Canada, an international commonwealth organisation, aspirating to use Learning for Development, are two out of many examples at international levels. India has also tried to evolve linkages between Education and National Development through the Education Commission Report (1966) to evolve a model of education, National System of Education, and followed the capitalist path of development. All are in search of a new model of education that can link education with development in a way that will be non-exploitative, non-destructive and humanistic way.

We have followed the Mahatma Gandhi's path and ways of thinking as reflected in the Nai Talim and approaches for *sarvodaya*, a model of role based learning and changing as proposed by J P Naik in 1982, and the path of modernity and post-modernity more from cultural viewpoint. It is considered that the current progress in automation, modern micro-processor development and applications, newer nano and other technology applications, emergence of globalisation and global communities, as well as Wiki processes, have all created enough insights and ways for creating a new paradigm of education and development for the post-modernity era. Our experiments with Role Based Education in Teacher Education program leading to a B Ed degree have given us process-result based education functions and mechanism and shown us a way to move ahead. All these have helped us to create a new paradigm of

education, the New Education, which links learning and development for self and social development and creativity.

This paper is an outcome of the group efforts of I-CONSENT- the Indian Consortium for educational Transformation, a small voluntary group of institutions and individuals- supported by the Commonwealth of Learning, in developing and delivering the scenario-situation based role learning in a situation for its development. The situations for a teacher in education are the usual classroom, school and community around. The success stories obtained, in spite it being a pilot program, which usually has inadequacies due to the search for new processes and mechanisms and their integration, have shown us the transformative value and power of the globally connected student can acquire, given autonomy and access devices to use global and local resources and development and freedom to find solutions to their own situated problems.

Role Based Education of a First Degree Program

Background and Context

Due to digital revolution and implementation of many programs of Government of India for promoting spread and use of Information Communication Technology (ICT), currently nearly 850 million people in India are connected by cell-phones and telephony. By 2014-15 nearly eighty percent will get connected by 2G connectivity. And by 2020 nearly 50% people will be having 3G -4G connectivity. This fast growth of networking along with mass access devices like mobile cell phone and tablet PC, there is going to be a radical change in the connectedness of the people and their processes of interaction and communication. This demands a radical reconstruction of the existing education system to respond to the changing scenario of connectedness emerging in India and the world.

The Department of Higher and Technical Education of the Government of Maharashtra had appointed three committees to consider the issues of large numbers of students and colleges in Maharashtra and subsequent fall in the quality of higher education and research. The issues of administration and examination are now dominating all the universities, more particularly of big city universities like Mumbai, Pune and Nagpur. The existing education being content centric learning, produces graduates that are not getting employment and in many cases are unemployable. Besides the internationalisation, the higher education has created global competition for jobs, which demand quality as well as cost-competitiveness. All these issues were referred to the three committees whose reports are already published and are being considered the Maharashtra State Department of Higher Education to formulate into an Act of the Maharashtra Public Universities (Anil Kakodkar, Arun Nigavekar and Ram Takwale).

We have already proposed an **umbrella organisation**, called *Maharashtra State Commission for Higher Education and Development* (MAHED), for all the Maharashtra for giving always connectedness to all higher education institutions and students with access devices with Internet connectivity. Purpose of the State level structure is to create autonomous structure for all the higher education institutional system in the State, ensure their connectedness, self-reliance as

well as resource support to the universities and colleges, ensure partnership between public and private institutions including State Governmental agencies with win-win approach and promote participation of students and learning communities in the joint endeavour for learning and developing into productive working –learning processes that enables to create social value and wealth. The autonomy ensured through the Act of Public Universities with umbrella organisational support for all the common sharable functions and resources, will certainly offer academic and creative opportunities to carry out academic study and development functions. Under this networked scenario using not only connectedness but also consequent technology empowerment, each University and its Campuses, all affiliated colleges and institutions are to be given autonomy. The networked scenario with open resource creation for all, and social networking are enabling learners to have all the autonomy in choosing study and practical / application courses of their choices to chalk out their own path of life-long development with specific goals in life and career. New paradigms of education can now be developed by each autonomous institutions for linking education with social development with different developmental and progress approaches. In fact a stage of education with learning on-line and on e-platform is now possible for evolving education and development systems that can ensure social equality and justice.

This paper proposes one of the ways of learning and socially developing with life and work centric education proposed by Mahatma Gandhi in Nai Talim and its implementation in ICT based connected society. For offering quality education, a single college or university campus will not be capable and complete in all the quality resources, and will need partnership with other institutions to form a consortium. Students and teachers will be playing various roles in working and learning to achieve multiple goals. We use the J P Naik's (1982) approach of role based learning for creating one's own future and finding unique functions so as to become a change maker in life. Students of today will demand the best of education from the local college, and may choose any other college or university in the State or outside for better and quality education. This demand of best quality education cannot be fulfilled by isolated college /university, and new approaches, mechanisms and management processes are to be adopted. Based on our pilot program we propose a model of education of role based learning for creating future for a student and his/her group.

Bachelors Degree in e-Education and Social Development

Bachelor's first degree study program usually consists of three subjects during the first two years and either three or one subject during the third year. A career and job oriented degree program in education and social development could be adopted as one of the three subjects.

Subject Areas Covered:

In the studies of e-Education and Social Development, following areas are basic ones:

1. E-or Electronic Media Communication and Applications
2. Education for Situated Development
3. Social Organisation for Empowerment
4. Social Development and Creativity

The courses could be modular and may have focus in studies of academic or technological or application / vocational nature. They could be linked with working and creating thereby linking them with career and employment.

The first degree programs could be designed and offered with vocational skill development and applications to the real life and work situations for various services directed towards related target groups in society. Such areas of services could be those of transport workers, home management services, delivery boys in various product delivery services etc. The first degree program is thus not only of general and liberal nature but combines with practical and social applications essential in society.

Objectives and Outcomes of the First Degree Program

The goal of the First Degree Program is to develop active, thinking and reflective graduate with a balanced combination of knowledge and its applications. Program should be useful in the personal and social development and creation of social value and wealth. The program should lead to the graduate to find career path and place in social developmental system of society ever progressing and enriching physically, financially and culturally.

1. To employ constructivist learning for linking education with development and value creation.
2. To cater to the multiple needs of intelligences and talents of students through their learning and development (LAD) individually and collectively.
3. To transform learning and developmental (LAD) with social value and wealth creation and use it to form, reform and transforming individual and society.
4. Help students in identifying their own role and unique functions that can be done competently and successfully, and become a change maker and follow life-long learning and development path.
5. Create social organisation, development for creating value and wealth for every student and learning groups.

Various role based courses in an area of development such as education, social organisation, social development and media communication at various levels of performance of a student and group will enable students to select and play academic and application based roles, and enable them, on the basis of their performance, to obtain certification of diploma and degree awards useful in life and work.

Curriculum for Role Based Learning:

Curriculum is taken as a **universal tool** in the hands of all learners and teachers playing various roles in the entire existing and changing scenario in life and work situations. In the Role Based Education, the goals of learning are of developing individually and collectively, of achieving aims and outcomes that are related to their roles. The activities and assignments are provided for playing specific roles in the situations for obtaining learning and experiences, and as a result, showing performance both in processes and results. Enough autonomy and free spaces are to be made available to individuals and groups in their learning and developing activities so that learners can use freedom for their creativity, innovation and entrepreneurship. The role based learning can obtain its resource support for their learning as well as development from the Open Education Resources (OER) and use them for improving their performance. Providers of education can offer academic and deployment support to students for identifying and following their personal learning and development paths as well as in their achievement of performance goals. The outcome of the role playing and role performance is therefore capacity and capability development as well as group building, creativity and co-creativity.

Concept of a Module in the Roles Based Education

Existing concept of modularity is entirely based on the content based learning system. In the existing system a modular course means how much of the knowledge content a student should learn in each term and year and complete the whole program in two or three or four years of study and get certification from the university. This is the content and teacher centric education system; and has been adopted in India from the west during the British colonial system.

In the roles based learning, the role of a student in a socio-economic and cultural context of life and work decides the functions and their results to be delivered. This is a process-performance based system in life situations. In any developmental area of life and work importance, there are many roles, main as well as supportive, which are to be played by each student in a team work. The role playing has three main parameters, *performance* in the context and situation, the team *result* and *level* of performance, personal as well group. Each student in a team adds his/her role performance in all these three aspects so as to make team a great success. The role based education is all about social education based on performance in processes and results and their level of achievements.

Development and progress in any area such as education, communication, socio-economic development etc., one needs many actors and change makers to work and perform. Any area therefore offers many roles for individual and group or team work. Role Based Education consists of playing a set of these roles that are identified in the curriculum and chosen by students, and finding out one's own role and unique functions one can perform the best way to contribute by means of individual performance in a team work. Emphasis in the role based education shift from content and knowledge acquisition to the learner and his/her learning performance in a team work. This is a learner, learning and performance centric education system.

New concept of a role as a module can be introduced for curricular purpose. The module will specifically will have three aspects of role based learning- performance, result and level. We associate concept of a Credit Point as a measure for the size or volume of learning work put in by

the student in playing a role. This becomes the link between the now existing system and the New Education system.

- **Role Based Course has Credit Points(CP)**

- 1 CP = 30-35 hrs of study/learning
- 1 CP = Minimum 60-70 hours of work (field/lab/work-place work) resulting in the experiential / developmental / production/service learning
- Role based Course may have 1 or more CPs. Each course should be limited by the need of the role at the level of performance.
- Levels of Performance in Higher Education are essentially at three levels
 - Basic Level
 - Intermediate Level
 - Degree Level, and
 - Master Level
- One year program has normally 1000 hrs of learning or 30-35 Credit Points.

- **Role Based Education has a set of role based courses in a program**

Each role based course is set for role performance fixed at one of the levels given above. A degree level role will be at the level where application of the knowledge, skills and technology is identified by the designers of the course and roles. At a particular level it will have some fixed credit points indicating the amount of study and work that needs normally to be done by the student to perform the role at that level.

Grading system is used to assess the performance in a role; and a grade point is indicative of the performance mastery achieved in a role. Curriculum usually defines the best performance and gives the top A or O grade to show the top performance at the level for which the degree program is designed. The top grade corresponds to the hundred percent performance in the role playing. This is similar to the content mastery achievement. However there is one basic difference in the two systems. A talented student by applying his/her commitment, intelligences and talents may perform a role at level that goes to the higher levels that fixed for the grade valuation range. The performance could be more than a degree level going at the masters level and need to be evaluated from that point of view. A student therefore can score more than the top grade for performance excellence. Promotion of such a performance excellence is the purpose of education.

Teacher Education: B Ed Program in e-Education:

Scenario –Situation related Role Based B Ed (e-Edu) Program

We specifically mention the case study of B Ed in e-Education carried out by the I-Consent. This professional degree program has been implemented as a pilot during 2009-11/12, and is now worked out in details for its system design and development. It has been observed that the program is generally applicable to all the degree programs of learning and developing, whether academic, professional or vocational. This program therefore becomes a norms and direction setting one for all other programs based on role based education.

The program is developed in the scenario-situation based learning (SBL) model of constructivist learning by designing scenarios and giving various roles in it to the students. They are to play them in their real life and work situations, which are either prescribed in the curriculum and selected by students. Here situations in teacher education are taken as the *class of students*, *school-a learning institution*, and *community around the school*. The scenario is usually of futuristic nature, designed by the teachers and given for study to students. Scenario is followed by a given role to be played by student. In order to prepare for the role in realistic situation of life and work, some activities and assignments are given to play the role in a given or chosen situation. Doing activities prepares student's capacity building for solving the situational issues in the assignments. Students are expected to perform the assignment in the situations, and submit their performance results to the tutor for evaluation.

Students are supported by the system with *on-platform services* of learning and developing (LAD) resources, and distributed class (DC) teaching by Course Team (CT) teachers. LAD is also supported academically by tutors with on-line and on platform services. Students also get local support in the situations by a Study Centre Team (SCT) of teachers and mentors. Study Center (SC) also works as a facilitation centre for students' local interactivities, which are carried out by learners with or without supervision of the SC teachers and mentors. The student performance is overseen, appropriately supported and guided by SCT mentors and CT tutors for their achieving the desired performances related to the situations. Thus a student learns from the educational resources as well as from the situational development obtained in the LAD processes.

In the process of learning and developing by a student and their groups, we have used research findings that learning, in order of its effectiveness, is achieved from learning resources, peers and teachers. The role of a teacher is the last one. In education, the Vygotski's social education ??? accepts learning from the Other More Knowledgeable Person in and around the society or community as the supporter for learning. In networked scenario of always connectedness, we are therefore using these factors quite freely and effectively in the structure and model of learning by offering enough autonomy to students to learn more from all these resources. This makes the system socially dependent, enables society to participate in the education, reduces unit cost of education and has all the qualities to transform the system into knowledge education system. The New Education system will enable students to have self-reliant and self-directed way of learning. This will help both in de-structuring of the existing heavy institutionalisation, and in giving autonomy to learners in learning and developing by becoming relevant, creative and innovative. The system should have the provision to provide scaffolds as and when necessary in the learning and progress of a student.

We have developed in B Ed program six role based courses, which provide for ten distinct roles to be played and learnt. They form two distinct groups for LAD:

Foundational Courses for Teacher Role Playing (Four Roles):

1. Teacher as *practitioner* of e-culture
2. Teacher as *nurturer* of e-culture
3. Teacher as *networker*, and

4. Teacher as *change Maker*

Pedagogic courses for Teachers Role Playing (Six Roles)

1. Teacher as *e-learning practitioner*
2. Teacher as e-learning *Resource developer*
3. Teacher as promoter of *quality*
4. Teacher as *techno-pedagogue*
5. Teacher as *evaluator*
6. Teacher as *action researcher*

And a **Project Work** to be carried out during the last term in a two year program to show the best own role performances and change makers achievements.

The other course details for the processes of learning, development and evaluation are included in the generic program of the first degree in the following paragraphs devoted to the new education system.

New Education

The education is called new with its meaning borrowed from the Nai Talim of Mahatma Gandhi, in which *Nai* or *new* means ever renewing or innovative education.

Life and Work Centric Role Based Education

The New Education model proposed here uses **Constructivist pedagogy** and the following learning and developing processes:

- **Life centric learning** in forming and creating a value chain (Mahatma Gandhi- 1937)

Learning ↔ Social Development ↔ Value Creation ↔ Self/Social Transformation

Life centric education links education with social development through constructivist learning and development approach. The result of development is always some products or artifacts and services. The further stages of development are value creation out of the products. The process obviously goes through marketing either by business or social marketing and converting products into money or social value. The social value of the products offer livelihood and enriches producer as well as society. The next stage of value chain development is converting the value into personal and social transformation, and is highly value and culture oriented.

- **Work centric learning** (Mahatma Gandhi, 1937)

Education/Learning + Work + Technology ↔ Wholesome Work /SUPW

The process is iterative and goes through looping for converting work into wholesome work. The wholesome work simultaneously has *routine, rest, progress* and *pleasure* (J C Kumarappa, 1957) combined into one. Every cycle of operation of work reforming is through looping process. Every time one needs more knowledge and technology, which should be used into work process to perfect work, and take it to higher level of quality and excellence. The sky is the limit to development and one can be the best in the class. This approach corresponds to the ADLI (Approach, Deployment, Learning and Internalisation) processes used in Baldrige model for achieving performance excellence; and is used in industry for its performance assessment. There is no limit to the growth and progress.

The concept of *wholesome* working, either personally or in teams, is successful departure from the industrial model used currently in which human being instead of treating as a creative being is treated as a 'resource' for production and productivity and used as a cog in the machine. The wholesome work has to be Socially Useful Productive Work (SUPW), useful both to the financial and social business marketing. The teams producing the artefacts are then linked with the consumers, now in the connected society, and can consider not from the exploitative approach but more from sustainability viewpoint.

- **Role Based Learning** for Creating Futures (Future goal centric Performance Learning- JP Naik, 1982)

As pointed out earlier, the role based learning is society centric, has primary and secondary stakeholders linked with localities for the situated learning and developing, and produces performance that adds to social value and wealth for the use by self, group /team working together, and for people around. It takes into account the places, ecosystem around and community.

New Education and Innovation

In general, the role based courses enter in all streams of professional, academic and vocational areas through its learning and development processes. It offers scenario-situation based contexts and settings for creating and innovating in the

- processes,
- products,
- people and
- places

The meaning of *Nai* or *New* is quite extensive and inclusive; and the constructivist learning can have as its goal to be *creative* so as to use education effectively for livelihood, *innovative* to progress continuously and for creating social value and wealth, and *entrepreneurial* to spread and market creativity and innovation in the world. Thus the New Education links effectively role performance with learning and development by creating social value and wealth.

Samavaya: Approach in Linking Learning and Development

Samavaya is a basic concept used in *Nai Talim* for balancing between the two processes that might have opposing forces. In case of education for learning and social development, it is the learning for development as well as learning from development. The two processes of learning for and from the social contexts and situations lead finally to the self development and social development. The balance between self and social is a great value education, and is to be learnt by a student in every activity and assignment; it may lead to high self development or may have social development with better social attitude and group behaviour. The two, self and social development, are highly contradictory if treated so. However social development achieved by nurturing universal human values will need balanced development of the two self and social interests. This dialectics or *dwaita* in Indian philosophy should lead to a balanced view of the two, self and social, and education needs to nurture the culture of cooperation and not only the competition with exploitation. The balance is to be found by every learner right in his/her learning and development processes involving activities. New Education emphasises working together of the team or *pariwar* with win-win approach for self and social development.

Constructivist Learning

Three Approaches to Active Learning

Constructivist learning is active learning and can take place through activities, assignments and projects. Activities could be organised in terms of series of isolated exercises, assignments are related to the scenario and situations, and project is an integrated approach for solving some specific social and educational problems related to the situation selected for development, which results into some outcome. Each one of them i.e. activity, assignment and project, have different and distinct purpose, processes, relationships and outcomes.

Activity Based Learning: Activities are the isolated, contextualized and situated actions and exercises that are to be done by a student to learn information/knowledge and related skills. Outcome is the learning of the specific syllabus objects from the prescribed texts and books. (Traditional bookish learning / education)

Process Based Learning: Process is a series of activities designed for achieving some specific goals and aims, and has some outcome or result besides learning. Work could be planned in the way of processes for obtaining both learning and socially useful and productive work. The work output in the process forms the development linked with learning and education, and has a social value and creativity associated with it. This forms the basic process of linking education and social development.

Role Based Learning: Learner here is working for playing a role in the situations and scenarios in real life and work areas. In this, s/he often requires working, learning and performing in a group or team, small or big. The success of the group work depends on the total performance of the team or people who are interested, involved and working together. Everyone is playing one or the other role-main, supporting, small or minor. If all the participants in the scene and situation have stakes in making the event or scene successful, then it becomes a group learning and developing activity. This is a win-win approach of all the stakeholders in organizing the learning events, and getting outcomes for all those participating (group learning and working). This is the basic approach of the role based learning (RBL) for personal, group and social development. It incorporates processes of cooperative creation of social wealth. Since all students are networked, they, along with providers, can participate in some well decided themes or activities of larger social interests. The working in such scenario-situation with collaborative working needs well-organized goal and the use of techno-social mechanisms to be used by all. This is the way Wikipedia, or YouTube and similar other mechanisms work.

The Role Based Learning enables individual differences to play differing and mutually supporting roles in cooperative actions, and help multiple intelligences and talent to appear, grow and prosper. It also offers at individual and group levels variety and flexibility of means and ways to achieve personal and social goals.

The performance of the first batch of the e-B Ed program (2009-11/12) has lead us to many of the ideas that are listed above. Some processes and mechanisms are already operational, while some recent ones will need further practical implementation. However the total framework and main mechanisms, processes and their nature of performance outputs are now quite clear. This emboldens us to propose the model, which we plan to implement from the second batch and in its scaling up activities.

First Degree Program

Structure of the Curriculum

Learning goal is to become a **Change Maker** by identifying one's Own Role(s) and Unique Functions that one can do the best way in the connected society.

Aims: To offer Quality Education For All stakeholders; Link education with situated development in the context of the globality; and Ensure self and social transformation and follow life-long learning and developing paths for self and social futures identified by a student or group.

Program Objective: “To help students to identify and perform ‘Own Role’ and ‘Unique Functions’ of change maker for Life Long Learning and developing paths to become Active, Reflective & Professional Teacher”

Stakeholders: The **Primary** Stakeholders are students (prime beneficiary), providers and deployment personnel and institutions /organizations as primary stakeholders who are involved directly in student's learning processes. **Secondary** stakeholders are the Participating Organizations (Communities, Parents, Local civil institutes and industries) who provide working and support facilities and services in their situated practicing and application places. The **Tertiary** Stakeholders are Society and Industry at large, who are not involved directly in the program learning activities, but are watching it since they also benefit socially from the New Education.

Universal and Local: The framework given above is quite universal. It can be applied to any learner for finding the best suited own roles and functions. While implementing, it requires to identify local situations, contexts either of real or virtual nature and of personal, people and environ based. This makes the education situated and the scenario to be depicted is entirely dependent on the learner's choice, particularly its futures that student will like to evolve for himself.

Educational Infrastructure and Facilitations

Always Connectedness and Communication Infrastructure

The educational infrastructure creating linkages with all learners, providers of education and support services is an essential feature of the New Education. In our model of e-B Ed, the A3 Connectivity is provided by MKCL on its platform, called ERA (e-Learning Revolution for All), which is made suitable for the networked learners. The *e-PASS (e-Platform and Support Services)* is redesigned from ERA for the role based choices of students and related interactivities for learning and development. Students use interactivities and group activities for learning and performing in the situations selected by students. Learners are simultaneously using many tools and techniques for social interactivities and networking, group organization and cooperative performance.

The infrastructure has the following main components:

- i. e-Platform and Support Services (e-PASS)
- ii. Open Education Resource (OER)
- iii. Learning Social Network
- iv. E-Portfolio

v. Swaraj: Autonomous Self-governance

These mechanisms are the minimum essential components for the use of communication technology and management of the new education.

Always Connectedness

The educational infrastructure creates A3-connectedness or *anyone, anytime, anywhere* (A3) is *always* connected in this community or society in space-time through broadband internet. We should use the latest connectivity of the third and fourth generation (3G, 4G) broadband internet and increase intimacy and dialogue between and amongst learners. However we may state from the available second generation broadband (2G) to all. The plan of connecting India is now fast developing and it the Telephone Regulatory Authority of India (TRAI) has the plans of connecting all by 2014 by 2G; and by 2020, nearly 50 % people in India will be connected by 3 and 4G broadband connectivity. Communication technology is continuously changing and is offering higher generation connectivity, bigger processing power and ubiquitous access devices such as mobile cell phones and tablet PCs along with other newer technologies. All these technologies empower learners in terms of increasing their power to communicate details and pictures, link to anyone anywhere, speed up actions from any place and do it at individual and group or institutional levels. The technology up-gradation and management of these newer tools have to be handled by the people who are specialised in these technology skills. This obviously makes a cooperative and collaborative work and cannot be effectively done by a single institution. Networking has therefore to nurture of sharing work with special education and training and doing work. We therefore propose that partnership arrangements with technologists and managers should to be used in order to concentrate in education on the main issues of interest in learning and developing essential for learners and providers and other stakeholders.

e-Platform and Support Services (e-PASS)

e-Platform is essentially a portal on which multiple facilities and services are provided. E-PASS contains all the support services essential for learning and developing from anywhere. The major users of the e-PASS are the learners, providers of education and members of primary and secondary networks and all those participating in the program of educating. It contains the Open Education Resources, social organisation and learning facilitations, distributed class (DC), forums, circles in various activities, lectures, webinars, workshops etc. All these should create an **learning ecosystem and educational environment** that will offer every learner a virtual environment that will be conducive for productive and value creating activities and experiences. New Education is linking it with life value chain and with all those activities that are related to learning, developing, value creating and transforming. All these activities and interactivities with resources, peers and teachers should find a place along with related knowledge and support services on the e-PASS. Thus e-PASS is creating a level playing field with activities and services for all the students in their striving for progress and creativity.

One of the major mechanisms is the **Credit Bank** in which all the activity- interactivity account is recorded either on-line or deposited by the student in his /her personal or group accounts. The Credit Bank account will be life-long account of a student for learning, development and value & wealth creation, and will form an important part of the e-Portfolio.

Open Education Resources (OER)

Open Education Resource creation has now become a global movement. It has been started in the first decade of the 21st century, and is still going through its evolution. Many such forms such as Wikipedia, YouTube, Open Course Ware of MIT (Boston, USA), Wiki-Educator etc., are now available for anyone anywhere. Their nature of formation, enablement and applications are different. Besides, the Google offers open access to a lot of global knowledge resources. The Open Resource movement allows one to use the content under the so called '*Creative Commons Licenses*' which enable learner to use and apply the content freely with some limitations. However the Creative Commons allows free use for personal study, allowing in some licenses to manipulate the content for personal creativity for non-commercial and non-exploitative use.

Amongst these open resource, the Wikipedia, a pioneer in open learning movement, has created a new process called wiki process, for collaborative working and creating commons by offering essential technology tools on its website. The technology offers for anyone to contribute their best resource, and promotes self mobilization and formation of amorphous community called wiki community. The Wiki community is quite regularly contributing, up-grading and raising quality of the content appearing in the Wikipedia. The Wiki working and creating has generated a mass participation process for creating common sharable value and knowledge wealth for communities and society. It is, as is called by Clay Shirky, a creativity and generosity of people in creating cognitive capital or wealth.

We are using OER for a specific purpose for creating learning materials to support the role based learning and development. The approach is to create the OER based on the concepts, explained at different levels, usually three- the foundational, degree and masters/research. Supporting the concept based OER is the learning resource that includes activities, assignments and projects suitable to the development area in which role is played. This will slowly replace the text-book concept and practice based on fixed syllabus, and will offer students wide variety of content and references in the concept. This open resource enables learners to study concept based content for self development and apply the capacity built to achieve higher performance level in the role playing. Contribution to the **Role Based OER** comes from the open resources available globally, resources contribution by the provider teachers and experts from Course Teams and Study Center Teams and also by students. All these resources are made available and accessible to students on e-PASS.

Learning Social Networks

New Education emphasises the cooperative learning, working and creating in small and big groups and in mass working together (Wiki working). Learning is linked with developing, value creating and socially transforming. These are organised in terms of learning and developing groups with small group of 3-5 students, big group or pariwar of 5 groups of about 25 persons and a large community based on collaborative working of pariwar. The process of social organisation and networking is forming self organised and autonomously governed groups and communities working together with common goals, organisational principles and ethical value practices. In Maharashtra, there are such organisational practices already well established and

working with great success; the *swadhyaya* (self-study) and *prayog* (experimenting) groups have created social value and productive wealth for their members in groups.

Primary and Secondary stakeholders will be organised into learning and developing groups and *pariwars*. Their education of cooperative learning and working will go through stages of education, organisation, creation of work /wholesome work with socially useful and productive work, converting work into social value and wealth, and transforming self, groups and communities and society around.

The consortium approach provider institutions to come together and promote formation of such groups with win-win approach. The main goal in such group formation is to benefit group-wise, socially and locally and in the process achieve high transformative value and change in self and groups. The groups will be of students and providers organised conveniently organised and working at different levels of performance in an area of interest in development area. Another set of groups in our group is of secondary stakeholders who support primary groups with their own win in their participation. Both the primary and secondary groups and *pariwar* form the learning and developing communities and they should be organised as a part of learning and development on the basis of principles and methods of *Swaraj* of Mahatma Gandhi or democratic participative decision making with social development in view.

The outcomes of the working of the primary and secondary groups are the *social value and wealth* or *social commons*. Its process of creation, utilisation and management needs to be managed so as to grow the social commons to a diversity, size and volume that would support variety and diversity of needs of learners and groups and give offer multiple ways in learning, developing and creating. Norms and methods of transactions of social commons as Open Resource amongst its members and outsiders have to be evolved and used in creating and using commons. They should done and controlled by the *pariwars* and their communities, and will have to evolve some culture and practices that will avoid *tragedy of commons*, a parasitic and predatory practices of some selfish people destroying the people's common created.

E-Portfolio

A student studies by doing activities, assignments and projects, and by participating in the interactivities using the e-platform based access to direct linkages with peers, teachers and outsiders in the network, and by using various mechanisms available openly outside. A student is also free to use various open resource tools for self organisation and expression, and use them in his initiatives and activities in the area of development. E-PASS has the technical facilities to record on-line all the physical parameters that help learner in his/her process of study. On platform education enables study of learning and development processes of students in their personal group working.

We have introduced e-Portfolio as a life-long tool for learning and development that can help every learner to know his path of progress in life and career. Performance in activities and assignments is recorded in the portfolio for assessing self-development. Each assignment also contains self evaluation and reflection of a student as well as comments and evaluation of a student

Student and group work is assessed periodically by tutors and mentors, and, at the end of each term, through an assessment in the term comprehensive viva based on personal and group portfolio submitted by a student. The base document of student's personal portfolio includes all the entries gathered on-line automatically, and all the submissions done by the student. This forms the base record for evaluation of a student's performance. Tutors and mentors form an important role in this process of supervising the work done and its submission to the evaluation board or body.

It is the duty of a student to take care of his/her personal portfolio. Personal e-portfolio consists of the following:

- E-Personal Portfolio
- Learner Profile updated
- Personal Framework Portfolio
- Presentation Portfolio for comprehensive viva.
- Group Portfolio

Portfolio is a good evaluation tool and helps in building life-long learning and development path.

Swaraj: Autonomous Self-governance

All attempts in technology and management development are directed to move towards massification of the system and its *zero cost* of operations and management. The communication technology and its newer open, transparent and sharable ways and their newer ways of management is essential for the always connected communities. Fortunately various managerial software customised to this need of Swaraj can provide self organisation and self-governance ways of autonomous group and community organisation. This is a management revolution. An approach has also to emerge to create artefacts, services and common wealth that can enrich individual, groups, *pariwar* and communities and help individual and groups to generate livelihood for each one. The essential principle that may get realised with social commons as basis is '*products are free, but services are charged*'. This creates in principle completely different way of management of production and marketing processes. The New Education should lead to such working, production and management processes and a new culture, e-culture, with appropriate social organisational participation.

We are using a concept of Swaraj, the self-rule and governance in small and big groups for learning , developing and creating. This is also incorporated in the Preamble of the Indian Constitution through its social organisation based on democracy, secularism and socialism. The concept of socialist democracy is taken up here as the Swaraj as envisaged in the local autonomous and self-governing groups and communities. It has been included in the New Education through autonomous *pariwar* creation for supporting learning and developing groups as well as learning community. Examples in practice are of the *Swadhyaya* (self-learning) and *Prayog Pariwar* (experimenting and learning group) and their successful ways of working in Maharashtra and outside for cultural and creative production education. In New Education, we promote formation of the primary and secondary stakeholder's learning groups and heir *pariwar* and communities to nurture these values and practices.

First Degree Program

Role Based Learning and Development (LAD)

Students are the main stakeholder in any educational program. However, all the primary networked members working in e-Education are also learners while they are performing their roles of teachers. During each program cycle consisting of say ten roles as in e-B Ed program, four related to networked role playing in relation to field of education, particularly teacher education. This part of learning four roles presupposes the preparatory knowledge and skills of basic IT literacy. Academic support services are provided by the Course Teams and Study Center Teams of locality.

A student of a first degree program goes through *Preparatory Stage* before admission and completes Three *Stages* of study and development program.

Preparatory Stage: This is the essential basic stage for a student to learn tools and skills essential for communication, working and developing in the networked scenario. This is an essential literacy requirement before getting admission into the degree program. These literacy skills include Information Technology (IT) tool use for various functions such as communication networking, surfing, searching, etc. Now a day the school students are learning all these skills and therefore students can take direct entry into the educational program at the Higher Education level.

Three Stages of the First Degree Program

(For two- year program cycle with four terms)

1. Foundation to Role Playing (First Term)

Role Playing is done in life and work situations by using A3-connectedness, which promotes virtual working and communicating. Hence the foundational roles as given in the teacher education, i.e. *Practitioner and Nurturer* of e-culture, *Networker*, and *Change Maker*, are relevant in all areas of development. They may include areas such as social subjects, lab workers, researchers, engineer, etc, These foundational roles will need scenario and technology appropriate to the area of development and application. The roles are to be played for working, learning and developing individually and in a group. The purpose of foundational role learning is self-organisation and management, cooperative and collaborative learning, working and creating and knowing change makers functions. Goal of role playing is to become a change maker in life and work situations. The foundational roles are therefore the basis for creation of futures in always connected communities for achieving self and group development in any discipline area of development.

2. Role Playing and Performing (2 and 3rd Terms)

Role playing is like taking *avatar* in a *situation* prescribed to or chosen by a student either individually or in a group. In a teacher education program in the areas of Educational Development in school sector, the situations were class of students, school and community around the school. Students play the six pedagogic roles by actually doing the situated assignments, and submitting the outcomes to the tutor for evaluation. Through the performance in activities and assignments, a student then identifies his/her best role or roles wherein personal intelligences, talent and interest have shown the highest application and performance results. The best role played successfully is possibly his/her own role. Related functions are also the unique functions a student can do the best.

3. **Playing Own Role(s) and Performing as a Change Maker** (4th Term in doing Project Work)

During the last term, the Fourth Term, a student carries out a major Project Work in the situations on the issues identified and prioritized by a student and/ or group and try to solve the issues and find solutions.

At the end of two year cycle of the program, a student should be able to identify his/her '**Own Role**' and **Unique functions**; and find Life-Long-Learning and Developing Paths for future life and career. In the process of studies, a student should try to find out short-term or long-term goals in life and work, identify career and employment. The program is thus links education with life and employment in the now situations.

Curriculum Transactions of Role Based Courses

Curriculum transaction take place at the Study Center /College where student is located. S/he has to attend distributed classes organized on-line and on-platform, learning by doing activities and solve situational assignments. However, studies can be carried out at home, work places, at community/college access centers and in situations selected or assigned by the Study Center mentor. All the records of on-line activities are stored in his/her log-in or personal portfolio, which forms a basic record of student's performance.

Technology Support Services are offered to students by workers on the e-Platform. They are technologists and managers and manage all the records, resources and their transactions and make facilitations work 24 x 7 days during course periods. The function is carried out by the MKCL personnel.

Academic Support Services are provided by the *Course Team (CT)* teachers, who work on-platform and offer not only content guidance and learning scaffolds to the students in their to do activities and assignments. The CT teachers essentially engage DC, guide students in their studies as tutors through e-PASS. CT tutors provide feedback and corrective support to students and oversee their performance during their on-line and on-platform interactivities. Role of Study Center Team of coordinator and mentors is to offer general guidance, locality support in situational work, in assignments and projects. The members of the Secondary Network also play an important role in field work and practicum of the students.

Support of More Knowledgeable Others- MKO (Vygotsky's Social Learning) in and around community or in networks is often used by students in their assignments and projects to do their work with higher level and quality. A3 connectedness and creativity and generosity of the people at large have and are now supporting many learners in their pursuits. This forms an important component of the social education on the education, career formation and getting livelihood.

General Academic and Educational Support is offered through multiple activates carried out during the academic year and program cycle. The activities consist of organisation of seminars/webinars, lectures, workshops, training sessions for becoming Wiki-educator, circles and special interest groups, etc. Through these activities organized regularly, we raise the quality of education and interactivity of all the students at the highest level possible. One of the aspects of student performance is their initiative taken individually or by groups and their outcomes. The other activities offer many opportunities for students to show their creativity and innovation.

Course is thus transacted through the activities and assignments supported by the structured as well as social support mechanisms. The learning and development is thus a free and creative

activity by students and is not limited and constrained to by what is prescribed in the syllabi, classroom teaching, textbooks, and written evaluation system.

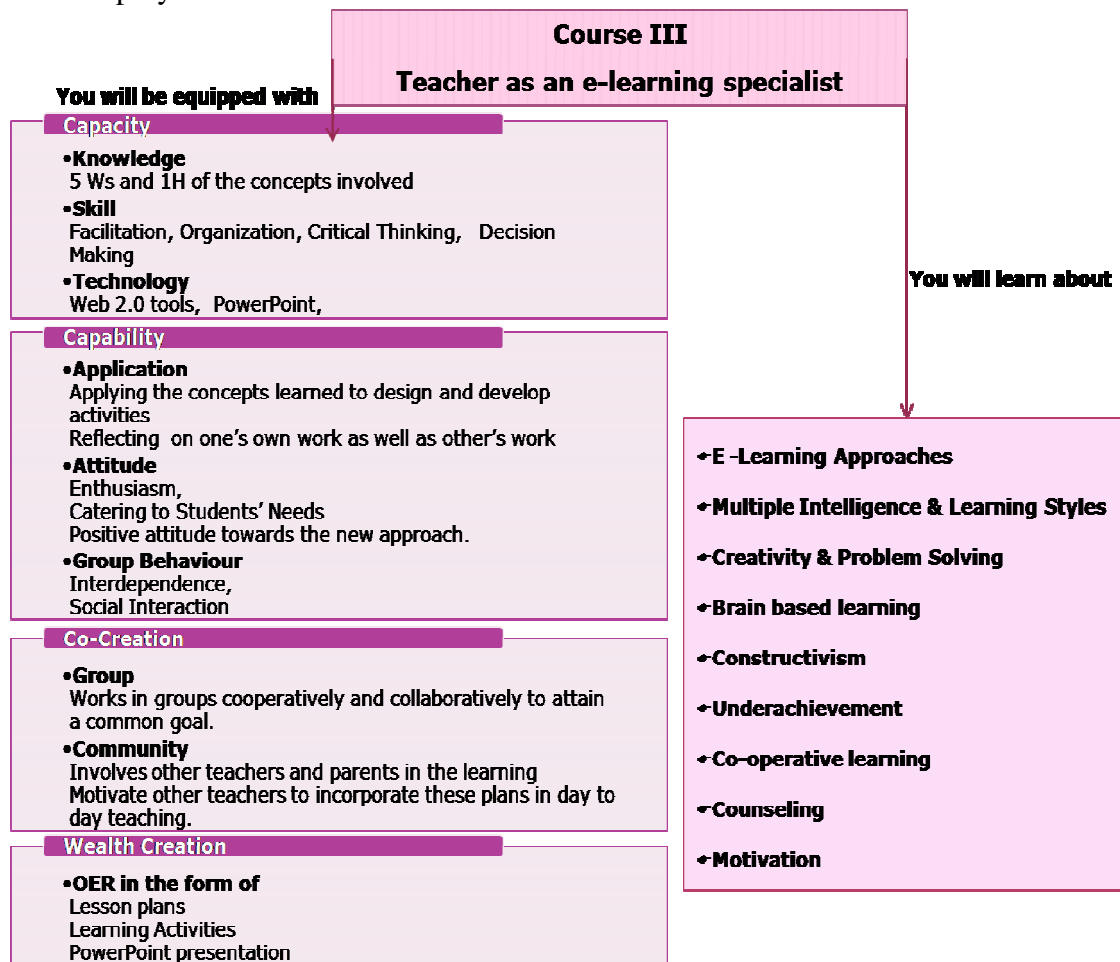
Further, the New Education enables one to use all the modes of delivery- distributed classroom, distance education and informal learning - through many activities in the situations chosen by students. All of these form a part in the performance evaluation.

By the end of the program, a student is expected to find his/her *learning and developing paths* with specific career and performance goals in view.

Role Map

A role in a societal context is always related to the roles others play in the situational contexts. Role playing is therefore a team work and has to be performed with a support of a small or big groups to achieve the desired objects and goals. A role is therefore linked with many other roles the team members play in the situation. This relationship is contextual, system dependent, cultural and situational, and has to be clearly known before a student plays a role in the areas of development.

Role Map of a role in teacher education program describes the relationship between learning of concepts for doing functions related to the role and achieving personality and group development required to deliver better performance. The performance is a process as well as product or outcome, and the results so obtained should have social value and wealth so as to find one's own employment and career in future life.



This is just a example of one role in teacher education program.

Evaluation of Student’s Performance

Continuous and Comprehensive Evaluation (CCE):

Integrated assessment of a student including his/her group performance & community work is dependent on the achievements of:

1. Capacity Building
2. Capability Building
3. Co-creativity Building
4. Personal and Social Value/wealth Creation.
5. Transformative Value Creation

After successful completion of program requirements and passing in the Program Comprehensive Viva a student is given a transcript of performance evaluation and is awarded degree

Components and Parameters for Comprehensive Performance Evaluation

Sr. No.	Components	Evaluation Parameters	Evaluation Tools	Outputs and Outcomes
Process Related				
1	Capacity Building	Knowledge and Skills – Cognitive and Tool based	Questions/ Activities- Answers; (Question Banks) Lab and Field Works	Capacity Building Acquisition of Knowledge, Skills and Tools Usage Related Self-Development
2	Capability Building	Applications, Attitudes and Social Behavior	Evaluation Rubrics, Group work, Reflections, 360 ⁰ Evaluation	Capability development, Co-creativity development, Cooperative Learning, Value Creation – Personal and Group, Related Self and Social Development

3	Co-Creativity Building	Work Performance, Values and Social Wealth Creation	Group / Pariwar Organization, Self Governance / organization and Autonomy achieved	Group Cooperative and Mass-collaborative work outputs, Social Wealth Created Social Development
Performance Result Related: Social Value & Wealth Creation				
4	Social Value Creation Process of individual, group and mass actions/work and related wealth creation	6-Wealth Created*: 1. Knowledge, 2. Technology, 3. Natural, 4. Social Organizational, 5. Ethical and 6. Physical and Monetary.	Personal & Group Portfolio Group Reports and share of each one in the group work	Outputs and outcomes can be linked with situational development with personal and group roles as the part of socio-economic wealth and culture of ethical & moral wealth creation processes.
5	Transformative Value Creation Process of self and group /society formation-reformation	Reflections, Attitude and Social Behavior in groups	Personal Framework Portfolio Personal and group reflections, peer & all round evaluation	Creativity, formative and reformative processes are the essential aspects of human and social development. They central theme of our model of education for development.

Self and Tutor Evaluation

Evaluation is an integral and continuous part of the learning process. A student should always be conscious of the goals or objects or aims s/he is achieving through the activities undertaken and the linkages of the process followed in the activity. This is continuous awareness of process-result aspects of any activity with short term or long-term impacts. In New Education this process should be an internal process and the teacher role is to validate it and suggest improvements so as to be realistic, relevant and transformative.

Capacity building is in terms of the assessment of knowledge, skills and tech-tool use and could be judged from the related information one has or skills of cognitive and psycho-motor type. Peer evaluation is also a good instrument and should be used effectively. Knowledge of levels in

knowledge and technology used would give the student where he stands in the relative and global contexts. Question –answer is the best format for the testing and evaluating.

Capability and co-creativity building is evaluated by using appropriate rubric and reflections. A group learning and working can be best evaluated in terms of social usefulness, the value it generates either in real or notional terms, and the change it can cause or causing in the self and group. This analytical, synthetic and integrative viewing is a hall mark of a graduate and should be nurtured as a part of learning and developing.

Major role of self evaluation is to understand the nature of social value and social wealth of the results obtained in the performance. The use of reflection in assessment to know the transformative value of changes due to change in attitude and practices one follows is very vital learning.

The role of a tutor or mentor in the self evaluation is to validate and, if necessary, rectify the assessment, and indicate the social dimensions of the process-results followed by the student with the local and global levels.

Performance Levels in Learning and Development

Basic components and parameters given above help in assessing the process-result performance in role based education. However another feature is the *level of performance* in assignment and projects. The program is designed for the first degree level with the goals well set in the curriculum. It is therefore natural to expect top grade in five point grading system is indicative of the top performance. However, since student is having autonomy to rise to the higher levels in performance, s/he may solve assignments and projects at much higher level than expected for the top level set by the program evaluation schema. In New Education, we should encourage achievements of higher quality rather than bigger coverage. Recognition should therefore be giving by way of comments of appreciation or higher grade than the top.

This approach in evaluation is consistent and closure to ‘ *judged as a whole*’ often used in educational assessment and evaluation in practice. In this we consider the overall performance as well as talents, intelligences and creativity of a student in his/her performance. However the process has to be transparent, accountable and open to peer overseeing, and can be easily practiced in the on-platform education of all the connected student-teacher community.

Levels in Learning and Development in Performance Results for a Degree Program	
<ul style="list-style-type: none"> • Levels in Learning in KNOWING • KNOWING Knowledge, Skills and Technology Tools and building Self-Development WITH CAPACITY BUILDING • OER support for learning consists of concept based information for roles. . 	<p>Levels in PERFORMANCE Results Knowledge and Technology Use in SELF-DEVELOPMENT</p> <ul style="list-style-type: none"> • Basic Level • Intermediate /Middle Level • Expert / Professional Level • Higher / Master’s Level • Research Developmental Level
<ul style="list-style-type: none"> • Doing and Performing together in applications and building capability – Self and Social Development with 	<p>Performance in Apps (Learning to DO AND WORK TOGETHER) for SELF AND SOCIAL DEVELOPMENT</p>

<p>CAPABILITY AND CO-CREATIVITY BUILDING</p> <ul style="list-style-type: none"> • OER support in active learning (RLA's) in RBL is through scenario-situation based activities, assignments and projects. 	<ol style="list-style-type: none"> 1. Standards Quality 2. Relevance Quality 3. Social Value of Performance Results
<ul style="list-style-type: none"> • Working and performing with large groups and masses (WIKI WORKING) for creating common wealth • OER includes all the social wealth created through Wiki processes of work and organisational performance. 	<p>Performance in Personal and Social Framework (Learning to Be-Transformative Value)for SOCIAL TRANSFORMATION:</p> <ol style="list-style-type: none"> 1. Personal and Group Framework Changes 2. Organisational and Ethical Values created

After the first degree program student can go in for higher degree in the same area like school and teacher education and create upgrade path for students to rise to masters and research levels in the area and roles in which student excels.

Role Based Performance Evaluation

A student is evaluated in Four Components:

a) Course Work: Roles Played

The performance success in role playing is assessed in terms of outcomes of capacity and capability building in all the ten roles divided into foundational roles and pedagogic/ technological / social / vocational roles. The basis of assessment is outcomes in learning and performance from activities and assignments in all the courses of program. It is evaluated on the continuous as well as term-end comprehensive assessment. Performance should also indicate the best and own roles and unique functions s/he performs.

b) Practicum / field -Lab Work

A student has to carry out assigned practicum or field or lab work. As the B Ed program is of professional nature, a student has to do nearly 12 lessons in various technological settings, and each lesson is guided, planned, conducted, supervised, assessed and feedback given to student for improving and reforming the lesson. Similar approach could be taken for the lab and field work in other areas with applications. The work is usually supported and supervised by the local mentors and experts. Students are to carry out it in different situations, and use latest knowledge and technological tools to achieve performance of high quality and relevance. Assessment is essentially on the basis of capability and co-creativity building and creation of social value and wealth.

c) Student Initiative: Other Activities and Outcomes:

Students are given free creativity space to carry out many activities with their own interests and liking. Students can undertake activities of special interests linked with area of development and use their talent, intelligences and personal and group involvement, and obtain results that are have individual and group creativity, innovation and entrepreneurship. Students should use

blogs, social networking mechanisms and website for individual or group activities, for self-expressions and for spreading the benefits of the work to others. They should exhibit their outcomes to all. The activities should also include participation of outside seminars, conferences and publish their results and case studies.

All these activities are to be given appropriate credits in relation to their role of change maker, which is to be evaluated on the basis of innovation, creativity and impact of the activities and level of achievement.

d) Project Work

Project is a major action research work carried out by a student on some relevant and vital issues of situational development. It is guided by a supervisor assigned or selected by student. A student also seeks guidance from peers and from more knowledgeable others in the network.

Project work is evaluated internally by the supervisor, and externally by external examiners at the time of final *Program Comprehensive Viva*. A student is assessed for his performance, work outcomes, impact and level of achievements; and is given final grade on the basis of his/her performance in the comprehensive viva.

Performance in the FOUR types of activities represents total performance of a student work. Two outcomes, one related to career development as a professional, and another to become change maker and role player performing the best role and unique functions to give out best results. Finding learning and development paths and short-term goals is one of the outcomes of the learning.

Quality Assurance in Performance Evaluation

Evaluation is based on continuous following and overseeing the student and his/her group activities and the performance achieved during the role playing exercises. A student's performance quality in the process-result based education is dependent on

- Input resources, facilitations and their use.
- Throughput interactivities ensured and their level.
- Integrated view of process-result outcomes and their impact.
- Internalization process followed and consequent reforming obtained.

Here the role of teachers and learning resources, their access and utilization in learning and development processes, and impact of results are important. The role of teachers and learning eco-system created are quite important in this program. It is highly desirable to have portfolio approach to evaluate teacher and management roles in the program or course performance. This will help in the improvement of the quality and excellence of the program and its deployment. It will also make students, teachers and management on equal footing of learners and developers, each one playing different roles at different levels of performance and creativity.

A student evaluation includes learning of knowledge of various concepts, cognitive skills, and tool & technology based skills. The applications of skills should be reflected in the process of solving situated problems and the nature and level of success achieved. The level of performance obviously indicates the functioning of the main and own roles of a student. Evaluation also includes individual and group work, and also assesses value created by the individual and groups in their work outputs. Thus performance parameters are assessed and evaluated in terms of student's learning, self and social development and value creation as well as his/her creativity, innovation and entrepreneurship displayed in the output by the individual and group.

Role Based Program of learning is of basic and universal nature since it is linked with life and work. It therefore encompasses all types of learning and developing processes, all streams of professional, academic, vocational and cultural educational areas of studies and development. In scenario-situation based contexts and settings, a student is given opportunity for creating and innovating the processes, products, people and places associated with the situation. The quality and excellence parameters and the system of quality assurance have to be designed and developed on the basis of performance of processes and results.

The performance excellence aspect in the role based education can use the well developed formulation of the Baldrige Model for Education. However Baldrige approach needs to be modified in the role based education for its use in evaluation of individual, group and community performance. Our direction of further development in role based education is to evolve basic criteria and a set of parameters for measurement of process-result way of learning in New Education.

There are two major processes of self-mobilization and self-study in the A3-connected communities of learners. The learning is maximum in resource based learning and second is peer learning. In fact recent research has shown that these two dominate the learning and development process of social learning, particularly the access to the *more knowledgeable person* (MKP) available on the networks. The role of teachers in education is substantially reduced due to OER based education as well as in the learning communities. A knowledgeable, active and reflective teacher is quite important and his role in tutoring, mentoring and guiding learners will remain forever in any system.

The independence of learners from the existing educational structures, which are highly constraining, limiting and forcing students to follow routine information learning is absolutely essential in the reconstructing of the education and in creating New Education. It will offer access and autonomy to students to open resources, to expertise available on-platform (e-PASS) and local practitioners and MKPs from A3 communities. The roles of tutors and mentors, the main persons in this system, can be performed by many MKPs in the community and society. MKPs have more knowledge, skills, practical expertise in tech-tool use, in production and service experience etc; and they can perform roles of tutors and mentors and increase participation of social groups /organizations in the new education. This approach of using social expertise and knowledge can help in evolving a mass system of education based on-platform based education and enable students to achieve higher quality performance success.

Quality Assurance Documentation:

In process-result based evaluation, the process is observed through on-line and on-platform performance record. Learner studies are overseen by tutors and mentors. Study includes periodic submissions of activities and assignments and receiving feedback comments from teachers/tutors/mentors from CTs and SCTs and reforming quality of submissions and performance.

We have introduced e-Portfolio as a life-long tool for achieving learning and development that helps a learner to choose progress paths in life and career. Portfolio consists of the documentary evidences of the role played, practicum/lab work carried and initiatives taken with their impact.

Through studies and work, a student creates following records on-platform, which is used for the final **program comprehensive viva**.

- i. **E-Personal Portfolio** (Performance Information)
- ii. **Learner Profile** reflecting changes in Personal Framework and Progress (change in attitude and social behavior)
- iii. **Presentation Portfolio** and Results (all the successful and quality assignments and field/lab work carried out) This includes practical work and the group work.
- iv. **Personal /Group Initiative** and outcomes
- v. **Project Work**

At the end of the program a student should be able to find his/her own role and unique functions as well as learning and development paths for the near future.

Program Comprehensive Viva (PCV) of a Learner

Evaluation at the end of the program depends on the course work performance and the project work submitted. The three components of theory, practicum and project as outcome of the program performance will depend on learning and output of the role-work carried out during all the four terms. A student presents all his/her best performances achieved during the two years for the Comprehensive Viva in the form of *Presentation Portfolio* supported by necessary details and evidences. Personal Performance Portfolio is the personal record of a student officially maintained and stored in the credit bank and log-in / personal portfolio.

Result of the Program Comprehensive Viva leads to the award of certification /transcript and degree.

Our Success Stories: e-B Ed Program

Some of them are

1. A student has already published a paper on the case study she conducted in the school improvement in the International Conference on Open & Distance Education. She helped school through social and public fund support to enrich this District Local Board School for girls from poor families to have computer lab, website and learner activities projected regularly.
2. Another housewife who left job, since her two children studying in primary school were getting disobedient and refusing to study, could teach them differently and have very good success. She started a blog for parents to nurture their children and has created her own identity in family and society.
3. A student working in a Company in a training division could become very successful trainer by using the knowledge and skills gained in the program.
4. A student of this program working in a school has become a computer support service provider to school teachers and students.
5. A student used expertise to start on-line tutoring.
6. Another student good in organisation and in use of information technology has become a tech teacher for the whole batch.

In spite of the inadequacies and difficulties that usually enter in the first pilot batch following a new program, we consider that the success is highly significant. It is due to autonomy given to learners, open resources made or are available to students, effective scaffolding provided, and a

lot of peer learning that is continuously happening in group interactivities due to A3 connectedness.

Consortium Approach for Partnerships Program Organization and Management

In A3 connected society, when learning communities could be formed with teacher and student groups, a single institutional set up is quite insufficient to address social situations in their variety and diversities as are required for personal needs and high quality learning for role based education. Here the need and requirement of each one are different, and their choices of development paths and goals are also unique. The education obtained is highly personalized and socialized. Under these circumstances, it is essential to employ a consortium approach for bringing together all the institutions, experts interested in the areas of development and create partnership for working together to offer quality education for every student registered in any institution coming under the network for their degree program.

We have already developed a model of consortium formation on the basis of responsibilities and work shared by each partner institution. The Indian Consortium for Educational Transformation (I-CONSENT) has found that the consortium working requires win-win approach, sharing of work as well as resources, and creating social common as OER that will be a common property of the Consortium for the open use of society. The most important binding force is of the common goals, values and principles of organisation and common cultural approaches.

Consortium Management of Teacher Education Degree Program (e-B Ed)

We give here briefly the model of I-CONSENT as used for Teacher Education program.

The program of a degree of e-B Ed is organized mainly by two trusted member partners of I-CONSENT, who agree through MOU to deliver the program. The two members are

- YCMOU: Nodal Agency having responsibility of academic coordination, leadership, overseeing and degree evaluation and certification.
- MKCL: Nodal Agency having responsibility for providing Information Communication Technology based e-Platform and support services (e-Platform and facilitations).

I-Consent, which has taken voluntary efforts in evolving this program as well as the Consortium way of Management, participates through its Area Advisory Council (AAC) of its members.

Program is governed by the **Academic Coordination Committee (ACC)**, and is managed through a core management group belonging to the two institutions. A **PEO (Program Executive Officer)** for the program is specially appointed for this program along with two persons from the two nodal agencies to supervise, execute and do all administrative and managerial support services as required by the program processes and performances.

The ACC consists of representatives of the two nodal agencies, promotional agency (I-CONSENT) and other experts and members from development and deployment institutions, who are active in the program.

The ACC functions in detail are overseeing academic and deployment activities, orientation of CTs and SCTs and leadership training, support to LAD groups, promotion of coop working and creating, and ensuring program coordination and quality assurance. ACC through its partner institutions manages productivity and efficiency of the operations and performances. By using the LAD communities (groups and pariwars) of primary network of stakeholders of providers of education and experts, ACC participates in the working of development, training and research organisation and promotion managed by the I-CONSENT. The Study Centres are the places for support to learners in the program and rely on the secondary network beneficiary communities.

All these *pariwar* and community formation is the joint responsibility and is managed by the I-CONSENT in partnership with its partner institutions and individuals. The ACC partners with I-CONSENT, ensures win-win aspects of learning and development in the program of all the participating institutions, individuals and communities. This is managed by I-CONSENT as a partnership activity. No non-member institution participates in the program organized and overseen by the I-CONSENT.

Programs in New Areas of Development

By following similar process, a consortium mechanism could be developed through partnerships of University Departments and Colleges affiliated to different universities by ensuring *public-private and community partnerships* (PPC-P). Consortia are developmental area and specific interest based. A Role Based Degree Program can be formed and structure of management could be evolved by following the approach of CTs and SCTs. A committee for the Developmental Area and related Program Management Committees could be the mechanism that can help in starting the program. A training program is an essential part of this radical reconstruction of education for changing the nature of the existing program of a degree of BA/ B Com / B Sc. Restructuring approach adopted by the University of Pune in 1981 could be used in starting from now situation and progressing. One of the three subjects could be the role based courses in one area of development related to skill as well as technology and related knowledge development. Single faculty courses such as education and management could adopt the courses in their program.

Application and Vocational Education

Approach to the role based education can be applied to vocational skill development, which has become very essential for the general degree program. A shift in the emphasis from academic nature to its applications and use of tool, skill and issue based learning (Capability and Co-creativity building) can be used for adding skill development aspects in the program. This vocational aspect can be combined with the related academic aspects of the courses through their academic applications and appropriate role based courses. A brief exercise in the four areas of development of technology, professional and social nature is given in the Enclosure.

New Education Features

Universal and Integrative

The New Education is life and work centric education for all learners always connected with latest Information Communication Technology networking and access devices. Role based education makes education dependent not only on accumulated global knowledge but also on the social knowledge and wisdom. The framework identified for the self and social development of a learner and their team working includes capacity, capability and co-creativity building of a person and group. The linking is through active learning and the parameters for evaluation are of knowledge, skills and technology tool use for capacity development; and applications, attitude and social behaviour change for capability development. The team working in small and big groups is considered vital for human creativity and innovation, and is accounted through the output of work and value created as the co-creativity building of individual and groups. The A3-networked situation gives rise to the use of Wiki processes; and Wiki working results into

creativity of masses into wholesome work products of social value and wealth. A student is given autonomy and freedom to choose situations, their issues and priorities, goals and paths of learning and development through their situational positions. This way of active learning gives ample opportunities for students in showing personal talent, intelligence and commitment to solve the issues, give benefits of their solutions to their stakeholders and contribute to the social value and wealth creation. In the process, a student in all probability is able to link knowledge with career opportunities and life-long development paths.

Global-Local Networking

The globalisation has been incorporated in the New Education through the following processes and mechanisms:

- E-Platform connecting all learners and teachers with latest A3-connectedness.
- Open Education Resources obtained from the global resources.
- Formation of virtual learning and developing groups and communities in which members may belong anywhere.
- Globalisation of local products with all their special characteristics of localisation, tradition and geo-climatic nature.

With all these global resources and reach, a local learner is able to internationalise his/her learning experience, create products and obtain value creation and livelihood through various trading and marketing practices.

Techno-social empowerment: Globalisation is manifested in modern and post-modernity times through the use of post-industrial technologies of digital nature. Increasing processing power and broadband connectivity is able to create virtualisation and simulation of higher and complex nature. This is enabling now to produce complex machines and their components through decentralisation; and computer controlled machines as is done in the MIT's Fab-lab, which enables to '*design and produce almost anything*'. The technology enabled decentralisation of production of artefacts and services in an innovative and economical ways is the main focus of education in post-industrial era. High personalisation and customisation of machine production processes will possibly affect the centralised factory model of mass production, excepting in cases of empowering technologies and tools wherein mass scale production is essential for achieving economy of scale. The post-industrial digital development is therefore a culturally creative mass empowerment and is an essential feature of the post-modernity.

Role Based Learning offers Universal Curriculum

By defining curriculum as an educational instrument of universal nature independent of technologies and methodologies, a new way of approaching education in a socio-economic and cultural context is being created through role based education. Its application to a first degree program in higher education indicates that the level of achievement is dependent on the level of answers to the same questions and queries but answered at higher and higher levels of knowledge, technology, processes and systems. The linearity included in the education of year-wise syllabus in the traditional educational model is now eliminated in the new education. A student has to play the same and own role, say the educational resource developer, and address the same or similar issues but at higher levels of knowledge, skills and technologies, say at the

master's or research levels, and contribute through the output and outcomes the products /innovations as a new knowledge in learning and development.

The traditional model of education decides the levels of achievements in learning of knowledge at various levels such as subsidiary level, degree –general and special levels, masters level and research levels in higher education.

The distinction between the traditional and new education is that the levels in formal education in the Western education model are obtained on the *basis learning of knowledge*, whereas in the New education they are decided on the *basis of social development and creativity* obtained in terms self and social development as well as creativity contributed in social commons- social value and wealth creation.

This approach of development of the same educational curriculum in terms of role played at different levels of achievement is being attempted in some cases of e-Education and Social Development in some institutions. Some details at lower levels are given in the enclosure.

Mass Personalised Curriculum

Digital technology with its high processing power and broadband communication is enabling to offer mass services with specialised aspects that can be selected for or by an individual to suit his/her needs, choices and likes. This is a mass-personalisation. In the role based education, each student uses global resources, common and general interactivities with a mass or class of students, and personalises it with the help of tutors and mentors or MKPs available in the nearby community, real or virtual. The learning and development path of each one is different, career development is unique, and the goals of living and working are also unique and distinct. This personalisation is obtained by an individual and groups by 'balancing' *samavaya* between self and social nature of life. Every individual is different and unique. He should therefore have unique roles, functions, paths and goals. All these choices are available to students in the New Education.

Educational Goal is focussed on Human and Social Development

Mass-personalisation and highly personalised approach in the role based education leads to the self and social development along with social value and wealth creation as social commons. This makes the new education as an instrument of socio-economic and cultural change for self and social transformation. The way is to have personal or group or social balancing approaches for physical and cultural development. In the identification of social wealth, one notices that only physical and financial wealth have physical value. All the other forms of wealth i.e. knowledge, technology, natural resources, social organisation and ethical & moral wealth are of different nature and cannot be rationally traded in terms of physical and financial wealth. Judging their value and valuation scale is itself a difficult task not done so far.

In New Education we are developing social organisational wealth through the primary and secondary networks of learners and providers for their learning and developing. In any democratic process carried out in small and big groups or at regional and national levels, social development benefitting all forms the basis of society. Creation of common wealth to be shared

by all not selfishly by a few, is the goal of welfare state with equality and justice as assured in the Indian constitution. Ensuring personal livelihood and security is the object of self and social development. This process certainly avoids exploitative processes and promotes contribution of everyone in the social commons to share with all. The social commons then becomes always available resource for personal and social development by fulfilling the basic human and biological needs. Accumulation of this social wealth and ways of sharing with and caring for others is the basis of social equality and justice. This is an integral part of the New Education, which offers social commons its legitimate place in the education as a change instrument. This is a cultural aspects and is an integral part of our program as e-culture essential in coop learning and working.

Larners and learning communities are the focus of our development and their productivity and performance through socially useful products fulfils the needs of progress and prosperity of the society and nation. Creating and performing with wholesome work makes a happy and satisfied person in learning and development process. The focus of new education is a person and society development at the higher levels of human development of modernity and post-modernity.

Freedom for Seamless and Borderless Global Education

Globalisation, localisation, open resources for learning and development, formation of learning groups and communities that are supporting each one in playing its own role enables the new education system to offer role based in different development areas and levels of performance. Vertical and horizontal growth in terms of levels and coverage of areas can be judged and assessed on the basis of poetfolio and the references given in the portfolio. The devices like credit banks with its credit accumulation and transfer system, e-portfolio, and networking offer borderless and seamless education. The issues of equivalence and recognition are the accompanying issues. They can be tackled easily at the developmental levels by judging the levels and coverage student have achieved. This is a task of the consortium and has to be handled along with the quality assurance for the programs. The performance portfolio enables one to compare and place the level of a candidate appropriately.

Convergence of Systems and Objects

In New Education, we are using new digital technology processes of communication and newer mechanisms that have appeared in this century of digital communication.

Convergence of Modes and Emergence of Trans-Mode of Education

New Education is using A3-connectedness with e-PASS and many devices like distributed classroom, OER, social networking, etc. All the functions of learning, developing virtually and communicating in real and virtual working is taking place in the virtual as well as real space. Students and teachers are using face-to-face communication, distributed classroom in synchronous and asynchronous mode and are also learning from many other global and local resources. Thus the formal, non-formal and informal modes are used by students and teachers some appropriate way and to find their outcomes in the performance of their roles. Thus all the

three modes, formal, non-formal and informal, are conveniently integrated in their studies and development. In fact they converge into a new mode of education, the New Education, which uses new processes and mechanisms of A3-connecteness. This is not only the convergence but also an emergence of a new and higher education mode of education, say a trans-mode of education, using entirely the processes and mechanisms of the new age society. The transmode of education of New Education is therefore empowering and transforming one, and has a great reforming value in education.

The system of role based education evolved uses the parameters to assess the transformative value of personal and group changes. This linkage of education is with transformation of individuals and society. The new education is human and society centric and has higher goals of development as its objects.

Convergence of Head, Heart and Hands in Active Learning

Our approach to new education treats learner and his/her groups and pariwars as integrated one in learner's self and social development. The framework of capacity, capability and co-creativity with parameters of knowledge, skills, tech-tools and apps with changes in attitudes and social behaviour does no distinction between cognitive, conative, affective and social behaviour domains and is an integrated education. The hierarchy associated with head, heart and hand is eliminated and one can have courses in are area for integrated development or in one or more with dominant aspects such as skill development, vocational courses etc.

Our approach fits very well with the top-down approach in setting hierarchical levels of the NVQF (National Vocational Qualification Framework) and links degree level skills to the professional levels essential in the global contexts. Starting from the top, the lesser levels are then the combination of knowledge, technology and skills in various proportions as is demanded by the local as well as global situations and employers.

Recently announce degree program by UGC in vocational studies could be introduces in some universities, by adding a full-time fourth year study of an additional subject area for RBL System. The degree could be in any one subject from e-Education and Social Development leading to B A /B Sc / B Com degree with special in Applications as in BA (Apps), B Sc (Apps) or B Com (Apps).

New Education is for Culture, Creativity and Transformation

In the development of self and social education with creativity resulting into social value and wealth creation, one can in an advanced stages of social development as in modern and post-modern stages of human development, one can link progress as the continuous evolution of persona and societies through the social structures of tribal, agrarian, industrial and post-industrial nature. Each has contributed to the social development in its unique ways. The first two were dependent on nature and agriculture. The third and fourth stages of human developments are more with auto-machines and micro-process based machine operations

resulting into industrial models and productivity, the autonomy stage of the fourth stage of human development, added automation and plenty of production and put a limit to the physical growth due to limited physical resources. The further growth has therefore has to be more intellectual and cultural, which is the current age of digital revolution. The education system has to respond to the needs of the age. The industrial form of education was the answer for the mass education, now the highly personalised and cultural education has to be addressed rather with creativity and innovation, which is addressed by the New Education form of the Nai Talim created by using latest post-modern technologies of communication. Since the digital technologies itself have modernising and transforming and empowering nature, using it creatively in New Education makes the new education culture and innovation and creativity dependent. Once physical and biological needs are fulfilled, the modernity and post modernity offers further path of human development and the we consider that the new education as the right instrument for change and transformation.

Concluding Remarks

On the basis of a pilot program of teacher education leading to a Bachelor degree and the philosophy of Nai Talim, we have created a new paradigm of education, the New Education. It is radical in the sense that it uses new processes and mechanisms created by the Digital communication technologies and connected society, and approached reconstruction of the existing education system, which is entirely based on learning for knowledge and on the Western model of education, into a new paradigm of life and work centric learning and role playing in a socio-economic and cultural contexts and situations. We have formalized the curricular approach, processes and mechanisms and constructivist methodology essential for any education system. It appears as outcomes in the form of self and social development with a creation of social value and wealth. The constructive and creative approach and development of capacity, capability and co-creativity of a person, groups and communities have given the new education its structural elements. The education is thus linked with situated development for creating scenario of the futures as perceived by the learners, leaders and society. Its externalities, which forms the major constraints and limits to choices and growth, are being moderated by the learners through the values and principles and consequent culture incorporated in the Preamble of the Indian Constitution representing modernity. This dialectical or *dwyaita* dilemma has been put before the learner and society in finding a balance for the self and social development.

Modern digital technologies are empowering people socio-culturally and enabling them to organise and self-mobilise into action for some common cause of persons and society. This social empowerment has been used in the new education by offering autonomy to a learner in the scenario of ample availability of learning and developmental resources through open education resources. The open resources creation, preservation and growth have an important role in new education for social development.

We have included the concepts of *samavaya*, wholesome work, valuation system for social voluntary work and services and concept of progress and pleasure in small actions of learning and developing and in producing socially useful and productive work from the Nai Talim of Mahatma Gandhi. The role based learning and change marker approach in social and systemic change is taken up from the J P Naik's formulation. We have used the decentralisation implied,

possible and accessible to all learners with digital access devices in the production and creativity processes in learning and development; and have evolved a new paradigm of education suitable for the post-industrial society.

This formulation has been created just recently. However it has been successfully demonstrated in a small sample of BEd in e-Education program. It needs to be practiced in many educational programmes linked with social development. The mass scale application of a IT literacy program evolved by the MKCL having enrolment of nearly one million learners gives us an opportunity to do mass-personalisation and social participation in the mass education process that should aim at equality and justice. I-CONSENT in partnership with Maharashtra Knowledge Foundation, a non-profit body of MKCL, may take this program further by ensuring scale and economy and using more knowledgeable persons from society in education.

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Enclosure

Courses in e-Education and Social Development

In e-Education and Social Development the courses are in FOUR areas of

1. **e-Media** Communication and Applications,
2. **e-Education** and Situated Development,
3. **Social Organisation** and Empowerment, and
4. **Social Development** and Creativity.

Role based courses have the same common curriculum. However they get their linkages with locality through situations identified for applications, and globality through OER for knowledge, skills and technology tools used for capacity building for becoming capable to solve the issues and problems identified.

Every role played in the always connected environment needs IT literacy up to the level of MSCIT course of MKCL as preparatory to work in the networked environment.

All roles playing is in A3 connectedness of students, teachers and secondary stakeholders. A student therefore has to have good understanding and skills in e-culture and group working in real and virtual situations. The roles of e-culture *practitioner* and *nurturer* and, in a networked scenario, a *networker* and *change Maker* are of great value in any role playing in the post-industrial socio-technology settings.

Roles in FOUR areas (tentative)

1. e-Media and Applications:

- i. Digital Photographer
- ii. Producer /Director of Production
- iii. Story Writer
- iv. Narrator
- v. Editor
- vi. Production Researcher

2. e-Education and situated development;

1. *e-learning practitioner*
2. *e-learning Resource developer*
3. *Promoter of quality and Excellence*
4. *Techno-pedagogue*
5. *Educational evaluator*
6. *Action researcher,*

3. Social Organisation and Empowerment

1. Group and Pariwar Member and Leader

2. Leader for Swaraj- autonomous self-governor
 3. Workplace and locality leader
 4. Trainer in group organisation and leadership
 5. Organiser of groups and their bonding and value creator
 6. Social Wealth creator and preserver
4. Social Development and Creativity.
1. Work output valuator
 2. Marketer in financial and social business
 3. Wealth Accountant and Banker
 4. Wealth Manager for its transaction and growth

Note that roles can be developed at three levels: foundational for masses, intermediate for interested in higher media applications and degree for professionals. The first two are skill based and useful for many.

The roles in their capability building get the academic, skill development and professional linkages.

Basic approach to the level based courses with the same curriculum is given below.

Professional and Academic Programs at different levels in RBL in Teacher Education

Situation: Class of students, School and Community around

Sr. No	Levels	Roles	Level Description
1	Basic Level Certificate and Diploma Primary School	<ul style="list-style-type: none"> • <i>e-Learning practitioner</i> • <i>e-Learning Resource developer</i> • <i>Promoter of quality and excellence</i> • <i>Techno-pedagogue</i> 	Focus on application for skill development and SVWC (Social Value and Wealth Creation) for situation
2	Degree Level B Ed (e-Education) B A (e-Education)	<ul style="list-style-type: none"> • <i>Evaluator and</i> • <i>Action researcher,</i> 	Practitioner in school and higher education
3	Master Level M Ed M A	The same role- areas in education and social development with issues taker up at higher levels of locality, region and nation at systemic and basic educational – learning and social	Linking development to modernity and post-modernity: Culture of creativity- individual and social

		developmental levels.	
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Nearly six pedagogic diploma /certificate could be created at three levels. Similar approach could be taken in case of the other three areas.

Open admission process could be resorted to, at the entry level of each degree/diploma program, by judging the prior learning in terms of

- Knowledge, skills and tools handled,
- Experience of handling variety of situations and scenario, and
- Production and service learning.

Role based learning that everyone gets in life and work can form the basis of open entry into New Education. A student has to show the progress in terms of his/her performance in various roles and role learning.